IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Monga	
Application No.: 09/930095	Group Art Unit: 2613
Filed: 08/15/2001	
	Examiner: Singh
Title: System, Device and Method for Managing Connection Quality in an Optical Communication System	
Attorney Docket No.: 120-177	
Client No. 14985BAUS01U	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Dear Sir:

In reply to the Final Office Action of March 10, 2008, and in accordance with the notice

of appeal filed with this request, please consider the remarks below.

REMARKS

Claims 1-27 are pending in this application. All of the pending claims are rejected under

35 U.S.C. 103(a) based on U.S. Pub. No. 2002/0156914 (Lo) in view of U.S. Patent No.

5,351,146 (Chan). Prior to this paper, Applicant successfully overcame a 35 U.S.C. 102 rejection

of the independent claims based on Lo by pointing out that Lo fails to teach the limitation that

services required by a user application are determined and provisioned. The Examiner now cites

Chan at column 5, lines 12-18; column 6, lines 45-49; column 7, lines 49-58; and column 11,

lines 8-61, as teaching the recited limitation that Lo fails to disclose. However, as will be

discussed below in greater detail, Chan represents an example of the problem that the presently

claimed invention helps to overcome rather than the solution.

As described in the Background of this application, an optical communication network is

capable of providing various communication services to its users.[1] However, one problem with

optical communications networks is that some services are expensive and need to be planned and

scheduled well in advance because changes to the optical communication network, such as

provisioning and switching optical communication paths, require substantial human

intervention.[2] Contrast that description of the problem with the description of the problem in

Chan:

>   While it is difficult to accurately predict the future, it is important
>   that the all-optical transmission system be capable of operating
>   with the applications that future network users may desire to use.
>   To this end, while there are undoubtedly many applications that

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[1] Specification at page 2, lines 31-32.
[2] Id. at page 2, line 32 through page 3, line 2.

will be created, some of the various *applications that are likely to be used* can be classified into three categories.[3] (emphasis added)

Chan describes the first category of applications that are likely to be used as having "anticipated data rates [that] span the range from Kbps to Gbps."[4] The second category is analog services.[5] The third category, described in a passage cited by the examiner, is user applications that require an optical interface.[6] The other passages cited by the examiner describe some of the features that potential future applications might use. For example, the passage at column 6, lines 45-49 describes transmission of a "light tree," and the passage at column 7, lines 49-58 suggests that other types of services such as ATM might be offered on top of the all optical network, and the passage at column 11, lines 8-61 describes scheduler agents that allocate paths to users. Clearly, Chan teaches estimating what services future applications might require, as opposed to what services are actually required at any given time. The limitation recited in the claims is determining and provisioning a set of application-specific optical network communication services for the user application based at least in-part upon the ascertained communication requirements and non-requirements of the user application. In other words, Chan guesses what a non-existent application might require at some time in the distant future, and the claimed invention determines what an existing application actually requires in the near term.

There are appreciable practical implications that result from the distinction described above. According to the cited combination of references, network engineers estimate what future applications might require and design the network accordingly. Note that if the estimate is

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[3] Chan at column 4, lines 49-55
[4] Chan at column 4, lines 57-58.
[5] Chan at column 5, lines 6-11.
[6] Chan at column 5, lines 12-18.

incorrect, substantial human intervention may be required to change the network. For example,

if an enterprise estimates the requirements of its applications and subscribes to a carrier's

services accordingly, an underestimate would require the enterprise to manually, i.e., person-to-

person, request that the carrier deploy additional service capability. Further, deployment of that

service capability could require human intervention. In contrast, the presently claimed invention

would help enable the carrier network to automatically determine the actual requirements of an

enterprise application and provision the required services, thereby mitigating the requirement for

human intervention. The claimed invention can also help the enterprise more efficiently

purchase services. The cited combination of Lo and Chan would yield an estimate of required

services that could be purchased from the carrier, i.e., nailed-up, 24-7 services. However, if the

services are required less frequently than 24-7, the enterprise is purchasing unused services. The

presently claimed invention improves efficiency because the carrier network can determine and

provision application service requirements when they are needed. For example, an enterprise

application could signal to the carrier network that particular service requirements are needed for

a period of 30 minutes on a particular date and time, or once per week. This is advantageous

because the enterprise would prefer to pay for 30 minutes per week of some costly service as

opposed to paying for the service to be constantly available. Further, even though it might not be

possible to predict when and what services are required, the claimed invention enhances

efficiency because the requirements of the application can be signaled when they are known.

      For the reasons stated above, claim 1 distinguishes the cited combination by reciting

"determining a set of application-specific optical network communication services for the user

application based at least in-part upon the ascertained communication requirements and non-

requirements of the user application, the communications services including at least one of

unshared lightpath, shared lightpath, routed path, latency, error rate, and protection mechanism."

Claim 6 distinguishes the cited combination by reciting "network component logic for

determining a set of application-specific optical network communication services for the user

application based at least in-part upon the communication requirements and non-requirements of

the user application, the communications services including at least one of unshared lightpath,

shared lightpath, routed path, latency, error rate, and protection mechanism." Claim 12

distinguishes the cited combination by reciting "an optical service agent operable to determine a

set of application-specific communication services required by the user application, the

communications services including at least one of unshared lightpath, shared lightpath, routed

path, latency, error rate, and protection mechanism." Claim 20 distinguishes the cited

combination by reciting "a network user application coupled to the optical communication

network, wherein the network user application comprises an optical service agent for obtaining

application-specific optical communication services from the optical communication network via

a user-to-network interface (UNI) sufficient to support operation of the network user

application."

Respectfully Submitted,

May 29, 2008   /Holmes W. Anderson/
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